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## 1930 Washington Fern Notes

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Several days before school closes, I begin to feel the lure of the wild—a strong desire to shoulder my pack and hie me away to the mountains and forests to search for new and rare plants—to stay until I “starve out,” my only weapon my botany pick and the only roof the open sky fringed with the spreading boughs of the alpine firs. When my food gives out, or the amount of my collections become burdensome, I come back to civilization long enough to care for the plants, feed up, and set out again. This past year I was late in getting started, but on July 22 I alighted at the Mt. Baker Lodge, altitude 4200 feet, and began one of the shortest but most successful seasons I have ever had. I gathered both flowering plants and ferns, but here I shall mention only the ferns I found, except to say that I have found about seven new species and varieties of the former. I should like to tell of the many thrills I experienced with bears, eagles, weather, etc., but that belongs elsewhere. Between the date above and August 20, I made two visits to Mt. Baker, one to Mt. Rainier, one to Mt. Angeles in the Olympics, and one to Mt. Stuart in the heart of the Wenatchee Mountains. All regions were interesting in some particular as you can judge by following the cited collections later on. My

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trips to Mt. Rainier and Mt. Angeles were too brief to do justice to either in the way of ferns, but both mountains yielded me several interesting endemics. Next year I hope to have a lot more to say about the ferns I hope to find in the Olympics. The following species were found, and localities are given for each.

WOODSIA SCOPULINA D. C. Eaton. Much more common than *W. oregana*. Widely distributed in this State, growing in clefts of cliffs, etc. Rocky clefts on Mt. Hermann, 4800 feet, *Thompson 5364*; rocky crags near summit of Mt. Angeles, scarce, 5400 feet, *Thompson 5582*; crevices of cliffs at 7500 feet, common, Mt. Stuart, *Thompson 5780*.

CYSTOPTERIS FRAGILIS (L.) Bernh. Rocky crevices east of Lodge, 4200 feet, Mt. Baker region, *Thompson 5287*; rocky crevices of Mt. Angeles, *Thompson 5479*; rocky clefts at summit of Skyline Ridge, Mt. Baker, 6000 feet, *Thompson 5651*. This fern is so common that I seldom collect it, occurring literally everywhere in all sorts of situations, even under sagebrush in the dry plains area.

POLYPODIUM VULGARE L. var. COLUMBIANUM Gilbert. (*P. hesperium* Maxon.) Widely distributed along the Pacific coast. Rocky crevices on Mt. Hermann, Mt. Baker region, 4400 feet, *Thompson 5357*; crags and crevices near summit of Mt. Angeles, 5400 feet, *Thompson 5581*; fairly common in the crevices of rocks and cliffs on Mt. Stuart, 7500 feet, *Thompson 5872*. It grows in the cracks of cliffs and its roots are very difficult to obtain even with a pick.

POLYPODIUM VULGARE L. var. OCCIDENTALE Hook. So common on the lower levels that I made only one collection out of a possible dozen. Lower wooded slopes of Mt. Angeles, 3000 feet, *Thompson 5507*.

POLYSTICHUM LONCHITIS (L.) Roth. Crevices of cliffs on south slope of Mt. Hermann, 4500 feet, *Thompson 5253*; rocky crevices at summit of Mt. Angeles, 5500 feet, *Thompson 5526*; crevices of cliffs on Mt. Stuart, 8000 feet, *Thompson 5782*. A beautiful fern to see growing on some wild ledge, often impossible to reach.

POLYSTICHUM LEMMONI Underw. This was the main object of the trip to Mt. Stuart where this fern occurs in great profusion from 5000 to 8000 feet, so abundant, in fact, that one might think this was its original home. See cut. By side of granite boulders, Mt. Stuart region, 5000 feet, *Thompson 5870*.

POLYSTICHUM SCOPULINUM (D. C. Eaton) Maxon. Seems to be the rarest fern yet in my experience, having looked for it in many likely places but so far have found only one clump—crevices of high cliffs, Mt. Stuart, 8000 feet, *Thompson 5837*.

POLYSTICHUM CALIFORNICUM (D. C. Eaton) Underw. This was the biggest surprise of the season, the finding that it occurred in great numbers along the lower levels in the Wenatchee Mountains, and indeed a surprise that no one else seems to have found it there. Second record, I believe, for this State. Common along trail to Mt. Stuart, 4000 feet, *Thompson 5871*.

POLYSTICHUM ANDERSONI Hopkins. This fern has been recently found on Mt. Baker, but I have yet failed to find it. While on the brief trip to Mt. Rainier, a forest ranger, Mr. T. A. Warren, had a clump on display which he had found in the Ipsut Pass, 5000 feet, and gave me a frond for my collection. I hope to have more to say of this fern next year.

THELYPTERIS DRYOPTERIS (L.) Slosson. Shady woods; widely distributed. I found it many times, but made



CLUMPS OF *POLYSTICHUM LEMMONI* AMONG THE ROCKS ON MT. STUART

only one collection from each locality I visited. Woods, Mt. Baker region, 4500 feet, *Thompson 5270*; by trail to Mt. Angeles, 3000 feet, *Thompson 5484*.

*THELYPTERIS PHEGOPTERIS* (L.) Slosson. Base of ledge below Austin Pass, Mt. Baker region, 4000 feet, *Thompson 5258*; rocky crevices, base of Panorama Dome, 4200 feet, Mt. Baker region, *Thompson 5721*.

*THELYPTERIS OREOPTERIS* (Sw.) Slosson. Talus slope below Austin Pass, with the last, *Thompson 5692*.

*THELYPTERIS SPINULOSA* (Muell.) Nieuwl. var. *DILATATA* (Hoffm.) St. John. Deep woods by trail of Spray Park, 4000 feet, Mt. Rainier, *Thompson 5463*; lower wooded slope of Mt. Angeles, 3000 feet, *Thompson 5506*; talus slope below Austin Pass, 4000 feet, Mt. Baker region, *Thompson 5720*; base of Panorama Dome, Mt. Baker region, 4200 feet, *Thompson 5720* $\frac{1}{2}$ .

*ASPLENIUM TRICHOMANES* L. Crevices of cliffs above Bagley Lake, Mt. Baker region, 4400 feet, *Thompson 5255*. I observed this species elsewhere, but each time it proved inaccessible.

*ASPLENIUM VIRIDE* Huds. Deep fissure at base of Panorama Dome, Mt. Baker region, 4200 feet, *Thompson 5259*; rocky crevices near summit of second peak, Mt. Angeles, 5500 feet, *Thompson 5480*; crevices of high cliffs, Mt. Hermann, 6000 feet, Mt. Baker region, *Thompson 5711*; cracks of cliffs on Mt. Stuart at 6000 feet, *Thompson 5774*. This supposedly rare fern is evidently not so rare with us, just hard to find, I judge. Each of the above collections is a first record, as far as I know, for each of the regions.

*ATHYRIUM FILIX-FEMINA* (L.) Roth. Widely distributed and very variable. The variety *sitchense* Rupr.

occurs in the mountains but intergrades of every sort occur making it impossible for an amateur to know where to draw the line between the species and the variety. Moist exposed talus slopes, Mt. Baker region, 4200 feet, *Thompson 5290*; common in wet swales up to 4800 feet, Mt. Baker region, *Thompson 5346*; by stream banks at 5500 feet, Mt. Stuart region, *Thompson 5773*.

*ATHYRIUM ALPESTRE* (Hoppe) Ryl. var. *AMERICANUM* Butters. So abundant in the Mt. Baker region as to become monotonous,—not so much so in the other places visited. Large tufts among old rock slides near Lodge, Mt. Baker region, 4200 feet, *Thompson 5276*; talus slopes on Mt. Hermann, Mt. Baker region, 5000 feet, *Thompson 5328*; talus slopes at base of Panorama Dome, Mt. Baker region, 4200 feet, *Thompson 5708*; base of boulders and cliffs, Mt. Stuart at 8000 feet, *Thompson 5783*. This fern was observed on both Mt. Rainier and Mt. Angeles, but failing to find good material, I neglected to get specimens from those places.

*STRUTHIOPTERIS SPICANT* (L.) Weis. The only fern I collected near home. Widely distributed and very abundant west of the Cascades, usually at slight elevations. Shady woods, south Seattle, *Thompson 5194*; moist shady woods, Mt. Rainier, 4000 feet, *Thompson 5471*.

*CRYPTOGRAMMA ACROSTICHOIDES* R. Br. Rocky slopes of Mt. Hermann, Mt. Baker region, *Thompson 5330*; rocky crevices near summit of Mt. Angeles, 5300 feet, *Thompson 5583*; talus slope below Austin Pass, Mt. Baker region, *Thompson 5694*. Observed in several localities; fairly common in the mountains, and occasionally near sea-level along the coast in old lava formations.

*PTERIDIUM AQUILINUM* (L.) Kuhn var. *PUBESCENS*  
Underw. Since this fern is literally a pest west of the Cascade Mountains, I took the trouble to make only one collection, a dwarfed specimen as follows: dry slope at 4000 feet by trail to Mt. Stuart, *Thompson 5855*.

*ADIANTUM PEDATUM* L. and variety *ALEUTICUM* Rupr.  
Moist draw above Bagley Lake, Mt. Baker region, 4300 feet, *Thompson 5263*; talus slope below Austin Pass, Mt. Baker region, 4000 feet, *Thompson 5705*; clefts of rocks along mountain streams, Mt. Stuart region, 4000 feet, *Thompson 5856*.

*CHEILANTHES SILIQUOSA* Maxon. Base of large granite boulders, Mt. Stuart region, 4000 to 6000 feet, *Thompson 5852*. Very abundant in the region above; but I failed to find it in any of the other places visited this past year. In the Mt. Stuart region it seems to spring up around nearly every large boulder, forming clumps often two feet across.

*CHEILANTHES GRACILLIMA* D. C. Eaton. Cracks of cliffs and slate ledges, Mt. Hermann, Mt. Baker region, 4300 feet, *Thompson 5696*; crevices of cliffs and ledges at 5500 feet, Mt. Stuart region, *Thompson 5772*. Rare in the Mt. Baker region, but very common in the Mt. Stuart region.

*EQUISETUM ARVENSE* L. Marshy bank of Chain Lakes, Mt. Baker region, 5000 feet, *Thompson 5367*. One of the season's disappointments was that I failed to find *E. scirpoides* Michx. I hope to find it in the Mt. Baker region in 1931. Several other species occur in the State, but I neglected them for time in the mountains.

*LYCOPODIUM SELAGO* L. Rocky ledge at base of Panorama Dome, Mt. Baker region, 4200 feet, *Thompson 5278*;

wet bank by Chain Lakes, 5000 feet, Mt. Baker region, *Thompson 5747*.

LYCOPODIUM SABINAEFOLIUM Willd. var. SITCHENSE (Rupr.) Fern. Common in the alpine meadows, by Bagley Lake, 4300 feet, Mt. Baker region, *Thompson 5297, 5674*; in a long stringy mass in deep shade of alpine firs, south slope of Mt. Hermann, Mt. Baker region, 5500 feet, *Thompson 5745*; alpine meadows, Mt. Rainier, 6000 feet, *Thompson 5445*.

LYCOPODIUM ANNOTINUM L. The typical form was found in a deep forest on middle slopes of Skyline Ridge, Mt. Baker, 3000 feet, *Thompson 5620*; while a startling extension of range for var. ACRIFOLIUM Fern. was found on the lower wooded slopes of Mt. Angeles, 3000 feet, *Thompson 5511*. The writer is indebted to Frère Marie-Victorin for the determination of this interesting find.

LYCOPODIUM CLAVATUM L. var. INTEGERRIMUM Spring. Rocky slope above timberline by trail to Lake Ann, 4500 feet, Mt. Baker region, *Thompson 5339*.

SELAGINELLA WALLACEI Hieron. Very variable, but typical forms were found as follows: rocky ledge below Austin Pass, Mt. Baker region, 4000 feet, *Thompson 5263*; dry slopes of Mt. Angeles, 5500 feet, *Thompson 5478*; an extreme variant was found in the cracks of a cliff on Mt. Hermann, Mt. Baker region, 4300 feet, *Thompson 5695*, and for the time being referred to this species.

SELAGINELLA SCOPULORUM Maxon. Another collection very doubtfully referred here. Mt. Stuart, 7500 feet, *Thompson 5779*.

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